SEQUENCE LISTING

<110> Evotec NeuroSciences GmbH

<120> DIAGNOSTIC AND THERATPEUTIC USE OF A SULFOTRANSFERASE
      FOR NEURODEGENERATIVE DISEASES

<130> 060307us Me/FM

<140> PCT/EP2004/052353
<141> 2004-09-29

<160> 22

<170> PatentIn Ver. 2.1

<210> 1
<211> 284
<212> PRT
<213> Homo sapiens

<400> 1

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Ser Lys Tyr Phe Glu Phe His Gly Val Arg Leu Pro Pro Phe Cys Arg
                20                  25                  30

Gly Lys Met Glu Glu Ile Ala Asn Phe Pro Val Arg Pro Ser Asp Val
            35                  40                  45

Trp Ile Val Thr Tyr Pro Lys Ser Gly Thr Ser Leu Leu Gln Glu Val
    50                  55                  60

Val Tyr Leu Val Ser Gln Gly Ala Asp Pro Asp Glu Ile Gly Leu Met
 65                  70                  75                  80

Asn Ile Asp Glu Gln Leu Pro Val Leu Glu Tyr Pro Gln Pro Gly Leu
                85                  90                  95

Asp Ile Ile Lys Glu Leu Thr Ser Pro Arg Leu Ile Lys Ser His Leu
            100                 105                 110

Pro Tyr Arg Phe Leu Pro Ser Asp Leu His Asn Gly Asp Ser Lys Val
            115                 120                 125

Ile Tyr Met Ala Arg Asn Pro Lys Asp Leu Val Val Ser Tyr Tyr Gln
    130                 135                 140

Phe His Arg Ser Leu Arg Thr Met Ser Tyr Arg Gly Thr Phe Gln Glu
145                 150                 155                 160

Phe Cys Arg Arg Phe Met Asn Asp Lys Leu Gly Tyr Gly Ser Trp Phe
                165                 170                 175

Glu His Val Gln Glu Phe Trp Glu His Arg Met Asp Ser Asn Val Leu
            180                 185                 190

Phe Leu Lys Tyr Glu Asp Met His Arg Asp Leu Val Thr Met Val Glu
            195                 200                 205

Gln Leu Ala Arg Phe Leu Gly Val Ser Cys Asp Lys Ala Gln Leu Glu
    210                 215                 220
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Ala Leu Thr Glu His Cys His Gln Leu Val Asp Gln Cys Cys Asn Ala
225             230         235                 240

Glu Ala Leu Pro Val Gly Arg Gly Arg Val Gly Leu Trp Lys Asp Ile
            245         250             255

Phe Thr Val Ser Met Asn Glu Lys Phe Asp Leu Val Tyr Lys Gln Lys
            260             265             270

Met Gly Lys Cys Asp Leu Thr Phe Asp Phe Tyr Leu
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<210> 2
<211> 171
<212> PRT
<213> Homo sapiens

<400> 2
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Met Ala Glu Ser Glu Ala Glu Thr Pro Ser Thr Pro Gly Glu Phe Glu
 1               5               10              15

Ser Lys Tyr Phe Glu Phe His Gly Val Arg Leu Pro Pro Phe Cys Arg
            20              25              30

Gly Lys Met Glu Glu Ile Ala Asn Phe Pro Val Arg Pro Ser Asp Val
            35              40              45

Trp Ile Val Thr Tyr Pro Lys Ser Val Gly Tyr Gly Ser Trp Phe Glu
     50              55              60

His Val Gln Glu Phe Trp Glu His Arg Met Asp Ser Asn Val Leu Phe
 65              70              75              80

Leu Lys Tyr Glu Asp Met His Arg Asp Leu Val Thr Met Val Glu Gln
            85              90              95

Leu Ala Arg Phe Leu Gly Val Ser Cys Asp Lys Ala Gln Leu Glu Ala
            100             105             110

Leu Thr Glu His Cys His Gln Leu Val Asp Gln Cys Cys Asn Ala Glu
            115             120             125

Ala Leu Pro Val Gly Arg Gly Arg Val Gly Leu Trp Lys Asp Ile Phe
    130             135             140

Thr Val Ser Met Asn Glu Lys Phe Asp Leu Val Tyr Lys Gln Lys Met
145             150             155             160

Gly Lys Cys Asp Leu Thr Phe Asp Phe Tyr Leu
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<210> 3
<211> 2419
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:nucleotide
      sequence of human SULT4A1 cDNA, splice variant 1

<400> 3
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agatggagga gatcgccaac ttcccggtgc ggcccagcga cgtgtggatc gtcacctacc 180
ccaagtccgg caccagcttg ctgcaggagg tggtctactt ggtgagccag ggcgctgacc 240
ccgatgagat cggcttgatg aacatcgacg agcagctccc ggtcctggag tacccacagc 300
cgggcctgga catcatcaag gaactgacct ctccccgcct catcaagagc cacctgccct 360
accgctttct gccctctgac ctccacaatg gagactccaa ggtcatctat atggctcgca 420
accccaagga tctggtggtg tcttattatc agttccaccg ctctctgcgg accatgagct 480
accgaggcac ctttcaagaa ttctgccgga ggtttatgaa tgataagctg ggctacggct 540
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<210> 4
<211> 2080
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:nucleotide
     sequence of human SULT4A1 cDNA, splice variant 2

<400> 4
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ggggaagagt tgggctgtgg aaggacatct tcaccgtctc catgaatgag aagtttgact 480
tggtgtataa acagaagatg ggaaagtgtg acctcacgtt tgacttttat ttataataac 540
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agaaacaaca acctgcatgc tcacaatacc cagacagtct actagccaaa agtcctgtat 600
gcattcattt attccttgct ggacaaactc tggaagcagc gtgtgaaaca gcgggggaag 660
ggaagagcgg cgtgagcgga gggagtgtga tgattcccaa ccgaagcagc tgtctcgcct 720
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<210> 5
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:nucleotide
      sequence of human SULT4A1 cDNA fragment

<400> 5
gattgcatct ttaataaaga catgttcccg gc   32

<210> 6
<211> 855
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:coding sequence
      of the human SULT4A1 gene

<400> 6
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cgggacctgg tgacgatggt ggagcagctg ccagattcc tgggggtgtc ctgtgacaag 660
gcccagctgg aagccctgac ggagcactgc caccagctgg tggaccagtg ctgcaacgct 720
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                                  Page 4

gaggccctgc ccgtgggccg gggaagagtt gggctgtgga aggacatctt caccgtctcc 780
atgaatgaga agtttgactt ggtgtataaa cagaagatgg gaaagtgtga cctcacgttt 840
gactttattt tataa   855

<210> 7
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
     human SULT4A1 splice variant 1 and splice variant
     2 gene

<400> 7
caaagtggtg gtcaggaggg t   21

<210> 8
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
     human SULT4A1 splice variant 1 and splice variant
     2 gene

<400> 8
ccgtttcaaa tacagcacca ag   22

<210> 9
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
     human SULT4A1 splice variant 1 gene

<400> 9
ctgaccccga tgagatcg   18

<210> 10
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
     human SULT4A1 splice variant 1 gene

<400> 10
ggcaggtggc tcttgatga   19

<210> 11
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
      human SULT4A1 splice variant 2 gene

<400> 11
tcacctaccc caagtccgt   19

<210> 12
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
      human SULT4A1 splice variant 2 gene

<400> 12
ttcatacttg agaaaaagca cgt   23

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
      human cyclophilin B gene

<400> 13
actgaagcac tacgggcctg   20

<210> 14
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
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<400> 14
agccgttggt gtctttgcc   19

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
      human ribosomal protein S9 gene

<400> 15
ggtcaaattt accctggcca   20

<210> 16
<211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
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<400> 16
tctcatcaag cgtcagcagt tc   22

<210> 17
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
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<400> 17
tggaacggtg aaggtgaca   19

<210> 18
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
      human beta actin gene

<400> 18
ggcaagggac ttcctgtaa   19

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
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<400> 19
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<210> 20
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
      human GAPDH gene

<400> 20
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<210> 21
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
     human transferrin receptor TRR gene

<400> 21
gtcgctggtc agttcgtgat t   21

<210> 22
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer for the
     human transferrin receptor TRR gene

<400> 22
agcagttggc tgttgtacct ctc   23

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